

## CURRICULUM VITAE

### Efstratios I. Kamitsos

Director of Research  
Theoretical and Physical Chemistry Institute (TPCI)  
National Hellenic Research Foundation (NHRF)  
48 Vassileos Constantinou Ave.  
Athens, 11635 Greece

Phone: +30 210 7273828  
Fax: +30 210 7273794  
E-mail: eikam@eie.gr

[ORCID ID: 0000-0003-4667-2374](https://orcid.org/0000-0003-4667-2374)

[Researcher ID: AHD-2850-2022](https://pubs.acs.org/doi/10.26434/chemrxiv-2022-ahd-2850-2022)

[Google Scholar](https://scholar.google.com/citations?user=eikam)



### EDUCATION

Ph.D. in Physical-Inorganic Chemistry, Brown University, USA (1983)  
Diploma in Chemistry, National and Kapodistrian University of Athens, Greece (1978).

### PROFESSIONAL EXPERIENCE AND APPOINTMENTS

- Director & Chairman of the Board, NHRF (03/2012-10/2013)
- Director of the TPCI/NHRF (10/1997-10/02, 01/2004-01/09, 06/2009-06/15, 06/2015-09/2020); Deputy Director of the TPCI/NHRF (09/2020-04/2021)
- Director of Research, TPCI/NHRF (11/1997-)
- Senior Researcher, TPCI/NHRF (03/1990-10/97)
- Assistant Researcher, TPCI/NHRF (03/1984-03/90)
- Research Associate (during military service), National Defense Research Center, Greece (09/1984-04/85)
- Postdoctoral Research Associate, Materials Research Laboratory, Brown University (01/1983-12/83)
- Teaching & Research Assistant, Department of Chemistry, Brown University (01/1979-01/83).

### MAIN RESEARCH INTERESTS

Materials physical chemistry:

- Structure and dynamics of ionic glasses.
- Nanostructured glassy materials with advanced electrical and optical functionalities induced by synthesis or external moduli (e.g., ion-exchange and thermal-poling processes and femtosecond laser-induced transformations).
- Archaeological glass from the Mycenaean to Roman and to the Byzantine period studied by non-destructive spectroscopic techniques to trace provenance, technology and trade routes.
- Applications of Raman and infrared spectroscopy to science, technology and industrial problems.

**EXTERNAL FUNDING**

Coordinator or participant in more than forty national and international research projects in collaboration with academic and industrial organizations (national: STRIDE, Networks, PENED, PAVE, ISTOS, Bilateral Scientific Schemes, AKMON, KRIPIS I, KRIPIS II, National Research Infrastructures; NATO: Int'l Scientific Exchange Programs; EU: Human Potential, Marie Curie, INCO, STREP, People, TOK).

**CONFERENCES AND INVITED TALKS**

Over 85 international conferences; more than 70 invited lectures at conferences, academic and research institutions. Member of organizing or scientific committees in 30 international and 6 national conferences; Co-chairman of two international conferences organized in Athens, Greece (1993, 2004); Co-organizer of symposia in two ICG conferences in the USA (San Francisco 1998, Boston 2019).

**TEACHING ACTIVITIES**

Part of graduate courses in Applied Molecular Spectroscopy (Chem. Dept., U. Crete, 1998-2000), Polymer Science and Applications (Chem. Dept., U. Athens, 2002-2009, 2011), and Cultural Heritage: Materials & Technologies (Dept. of History, Archaeology & Cultural Resources Management, U. Peloponnese, 2017). Supervision at TPCI of twenty post-doctoral fellows, twelve Ph.D., three MSc and five honors students.

**RESEARCH MANAGEMENT AND EVALUATION**

Member (09/1992-10/97) and chair (11/1997-07/2016) of the Scientific Advisory Council of the TPCI. Director of the TPCI/NHRF (10/1997-10/02, 01/2004-01/09, 06/2009-06/15, 06/2015-09/20), member of the Board of the NHRF (11/1997-09/2020) and Director & Chairman of the Board of NHRF (03/2012-10/2013). Member of numerous electoral committees for researchers and institute directors of Greek Research Centers (1995-) and faculty members of Greek Universities (2015-). Regular referee for more than fifty international journals in the fields of physical chemistry, physics and materials science. Reviewer for national and international research proposals. Member of the TES Natural Sciences of the National Council for Research & Technology (ESET) in Greece (06/2011-10/2019); national expert for the Horizon 2020/EC programs: European Research Council, Marie Skłodowska-Curie actions and Future and Emerging Technologies (2014-2019); member of the Board of the Greek Research and Technology Network, GRNET (07/2014-07/2018); Chairman or Deputy Chairman for the Natural Sciences Evaluation Committees of the Hellenic Foundation for Research & Innovation - HFRI/ΕΛΙΔΕΚ (01/2019-12/2021).

**PROFESSIONAL AFFILIATIONS & ACTIVITIES – PAST & PRESENT**

Association of Greek Chemists; Hellenic Ceramic Society; Hellenic Society for the Science and Technology of Condensed Matter (HSSTCM); Advisory Panel on Physical and Engineering Science & Technology of the NATO Science Committee (11/2002-06/04); Int'l Board of Advisers of the Int'l Materials Institute for New Functionality in Glass (2004-2007); Technical Committees on Glass Structure and Properties (TC03, 2001-) & Structure & Vibrations (TC26, 2009-) of the Int'l Commission on Glass (ICG); Council of the ICG (09/2004-06/2019).

**AWARDS AND DISTINCTIONS**

State Scholarships Foundation of Greece (1973-77); Papadakis Foundation, National and Kapodistrian University of Athens, Greece (1977-78); Brown University Fellowship by Du Pont (1979); Brown University Fellowships (1980-83); Sigma Xi-Elected (1981); The Potter Prize in chemistry for the best Ph.D. thesis, Brown University (1984); The 2021 Alfred R. Cooper Award by the American Ceramic Society; Honoree of the 10th International Conference on Borate Glasses, Crystals and Melts (Corning, NY, USA; conference postponed for August 2023).

## PUBLICATIONS / CITATIONS

- over 225 papers in peer-reviewed international journals
- 2 international patents
- 6 invited papers/chapters in books
- over 75 articles in proceedings of international and national conferences
- Co-editing of two books
- More than 11,000 citations with h-index=55 (Google Scholar, 05/2022), or more than 8,800 citations and h-index=50 (WoS, 05/2022).

## SELECTED RECENT PUBLICATIONS

1. "Structure of lead borate glasses by Raman,  $^{11}\text{B}$  MAS, and  $^{207}\text{Pb}$  NMR spectroscopies", K.I. Chatzipanagis, N.S. Tagiara, E.I. Kamitsos, N. Barrow, I. Slagle, R. Wilson, T. Greiner, M. Jesuit, N. Leonard, A. Phillips, B. Reynolds, B. Royle, K. Ameku, and S. Feller, [J. Non-Cryst. Solids 589, 121660 \(2022\)](#).
2. "Yttrium and rare-earth modified lithium orthoborates: Glass formation and vibrational activity", B. Topper, N.S. Tagiara, A. Herrmann, E.I. Kamitsos, and D. Möncke, [J. Non-Cryst. Solids 575, 121152 \(2022\)](#).
3. "Archaeological and historical study of the Lykion complemented by IR and Raman spectroscopic investigation", M. Papageorgiou, V. Boura, D. Palles, H. Brecolaki, K. Kallintzi, M. Chrysafi, and E.I. Kamitsos, [Sci. Cult. 8, 95 \(2022\)](#).
4. "Short-range structure, the role of bismuth and property-structure correlations in bismuth borate glasses", C.P.E. Varsamis, N. Makris, C. Valvi and E.I. Kamitsos, [Phys. Chem. Chem. Phys. 23, 10006-10020 \(2021\)](#).
5. "Anomalous deformation behavior in ULE glass upon micro-indentation: A vibrational spectroscopic investigation of the induced structural changes in a Ti-silicate glass", D. Möncke, F. Lind, B. Topper, and E.I. Kamitsos, The Journal of Physical Chemistry virtual special issue "Hellmut Eckert Festschrift", [J. Phys. Chem. C 125, 4183 \(2021\)](#).
6. "On the absence of doubly bonded Te=O groups in TeO<sub>2</sub> glass", A.G. Papadopoulos, N.S. Tagiara, E.D. Simandiras, and E.I. Kamitsos, [J. Phys. Chem. B 124, 5746 \(2020\)](#).
7. "Short-range disorder in TeO<sub>2</sub> melt and glass", O.L.G. Alderman, C.J. Benmore, S. Feller, E.I. Kamitsos, E.D. Simandiras, D.G. Liakos, M. Jesuit, M. Boyd, M. Packard, and R. Weber, [J. Phys. Chem. Lett. 11, 427 \(2020\)](#).
8. "Vibrational study of lithium borotellurite glasses", K.I. Chatzipanagis, N.S. Tagiara, D. Möncke, S. Kundu, A.C.M. Rodrigues, and E.I. Kamitsos, [J. Non-Cryst. Solids 540, 120011 \(2020\)](#).

9. "Anion polarizabilities in oxy-nitride glasses. Establishing a common optical basicity scale", D. Möncke, S. Ali, B. Jonson, and E.I. Kamitsos, [Phys. Chem. Chem. Phys. 22, 9543 \(2020\)](#).
10. "Halogen-NH<sub>2</sub><sup>+</sup> interaction, temperature induced phase transitions and ordering in (NH<sub>2</sub>CHNH<sub>2</sub>)PbX<sub>3</sub> (X = Cl, Br, I) hybrid perovskites", A.G. Kontos, G.K. Manolis, A. Kaltzoglou, D. Palles, E.I. Kamitsos, M.G. Kanatzidis, and P. Falaras, [J. Phys. Chem. C 124, 8479 \(2020\)](#).
11. "Short-range structure, thermal and elastic properties of binary and ternary tellurite glasses", N.S. Tagiara, E. Moayed, A. Kyritsis, L. Wondraczek, and E.I. Kamitsos, [J. Phys. Chem. B 123, 7905 \(2019\)](#).
12. "Surface-enhanced Raman spectroscopy of graphene integrated with plasmonic silicon platforms with a three-dimensional nanotopography", M. Kanidi, A. Dagkli, M. Kandyla, N. Kelaidis, D. Palles, A. Colli, E. Lidorikis, S.A. Giamini, J. Marquez, A. Dimoulas, and E.I. Kamitsos, [J. Phys. Chem. C 123, 3076 \(2019\)](#).
13. "Mixed alkali/alkaline earth-silicate glasses: physical properties and structure by vibrational spectroscopy", L. Grund Bäck, S. Ali, S. Karlsson, D. Möncke, E.I. Kamitsos, and B. Jonson, [Int. J. Appl. Glass Sci. 10, 349 \(2019\)](#).
14. "Femtosecond laser-induced transformations in ultra-low expansion glass: Microstructure and local density variations by vibrational spectroscopy", I. Efthimiopoulos, D. Palles, S. Richter, U. Hoppe, D. Möncke, L. Wondraczek, S. Nolte, and E.I. Kamitsos, [J. Appl. Phys. 123, 233105 \(2018\)](#).
15. "Mixed-modifier effect in alkaline earth metaphosphate glasses", K. Griebenow, C.B. Bragatto, E.I. Kamitsos, and L. Wondraczek, [J. Non-Cryst. Solids 481, 447 \(2018\)](#).
16. "Synthesis, thermal and structural properties of pure TeO<sub>2</sub> glass and zinc-tellurite glasses", N.S. Tagiara, D. Palles, E.D. Simandiras, V. Psycharis, A. Kyritsis, and E.I. Kamitsos, [J. Non-Cryst. Solids 457, 116 \(2017\)](#).
17. "Structural stability, vibrational properties and photoluminescence in undoped and SnF<sub>2</sub>-doped CsSnI<sub>3</sub> perovskites", A. Kontos, A. Kaltzoglou, E. Siranidi, D. Palles, G. Angeli, M. Afranis, V. Psycharis, Y.S. Raptis, E.I. Kamitsos, P. Trikalitis, C. Stoumpos, M. Kanatzidis, and P. Falaras, [Inorg. Chem. 56, 84 \(2017\)](#).
18. "Transition and post-transition metal ions in borate glasses: Borate ligand speciation, cluster formation and their effect on glass transition and mechanical properties", D. Möncke, E.I. Kamitsos, D. Palles, R. Limbach, A. Winterstein-Beckmann, T. Honma, Z. Yao, T. Rouxel, and L. Wondraczek, [J. Chem. Phys. 145, 124501 \(2016\)](#).
19. "Technology issues of Byzantine glazed pottery from Corinth, Greece", E. Palamara, N. Zacharias, M. Xanthopoulou, Zs. Kasztovszky, I. Kovacs, D. Palles, and E.I. Kamitsos, [Microchem. J. 129, 137 \(2016\)](#).
20. "Halogen effects on ordering, orientation and bonding of CH<sub>3</sub>NH<sub>3</sub><sup>+</sup> in CH<sub>3</sub>NH<sub>3</sub>PbX<sub>3</sub> (X=Cl, Br, I) hybrid perovskites: A vibrational spectroscopic study", R.G. Niemann, A.G. Kontos, D. Palles, E.I. Kamitsos, A. Kaltzoglou, F. Brivio, P. Falaras, and P.J. Cameron, [J. Phys. Chem. C 120, 2509 \(2016\)](#).
21. "Vibrational spectroscopic and bond valence study of structure and bonding in Al<sub>2</sub>O<sub>3</sub>-containing AgI-AgPO<sub>3</sub> glasses", D. Palles, I. Konidakis, C.P.E. Varsamis, and E.I. Kamitsos, [RSC Adv. 6, 16697 \(2016\)](#).

22. "Ultrashort pulse induced modifications in ULE - from nanograting formation to laser darkening", S. Richter, D. Möncke, F. Zimmermann, E.I. Kamitsos, L. Wondraczek, A. Tünnermann, and S. Nolte, [Opt. Mater. Express 5, 1834 \(2015\)](#).
23. "Ionic conductivity and self-assembly in poly(isoprene-b-ethylene oxide) electrolytes doped with LiTf and EMITf", G. Zardalidis, E.F. Ioannou, K.D. Gatsouli, S. Pispas, E.I. Kamitsos, and G. Floudas, [Macromolecules 48, 1473 \(2015\)](#).
24. "Structure and properties of orthoborate glasses in the  $\text{Eu}_2\text{O}_3$ -(Sr,Eu)O- $\text{B}_2\text{O}_3$  quaternary", A. Winterstein-Beckmann, D. Möncke, D. Palles, E.I. Kamitsos, and L. Wondraczek, [J. Phys. Chem. B 119, 3259 \(2015\)](#).
25. "Infrared spectroscopy of glasses", E.I. Kamitsos, [Modern Glass Characterization](#), M. Affatigato (Ed.), John Wiley & Sons, Inc., Hoboken, New Jersey, USA; 2015, Chapter 2, pp. 32-73. ISBN: 978-1-118-23086-2.  
DOI: [10.1002/9781119051862.ch2](https://doi.org/10.1002/9781119051862.ch2)